

REMARKS

Applicants add new claims 14-20. Accordingly, claims 1-20 are all the claims pending in the application. There is no new matter. Claim 14 is at least supported by page 6, lines 3-4. Claim 15 is at least supported by page 6, lines 10-12. Claims 16 is at least supported by page 6, lines 20-21. Claims 17 and 19 are at least supported by page 4, lines 10-29. Claim 18 is at least supported by page 6, lines 21-26. Claim 20 is at least supported by page 7, line 23 to page 8, line 10.

Claim rejections under 35 U.S.C. § 112, second paragraph

Claims 1, 5, 6 and 10 are rejected under 35 U.S.C. § 112, second paragraph.

In view of the claim amendments submitted with this Amendment, Applicants respectfully request the Examiner to withdraw the 35 U.S.C. § 112, second paragraph rejection of claims 1, 5, 6 and 10.

Claims rejections under 35 U.S.C. § 103

Claim 1, 4, 5, 6, 9 and 10 are rejected under 35 U.S.C. § 103(a) as being unpatentable over Dahlman et al. (U.S. Patent Publication No. 2002/0145988; hereinafter “Dahlman”) in view of Walton et al. (U.S. Patent Publication No. 2006/0121946; hereinafter “Walton”).

Claim 2 is rejected under 35 U.S.C. § 103(a) as allegedly being unpatentable over Dahlman in view of Walton, and further in view of Chang et al. (U.S. Patent Publication No. 2002/013613; hereinafter “Chang”).

Claims 3 and 8 are rejected under 35 U.S.C. § 103(a) as allegedly being unpatentable over Dahlman in view of Walton, and further in view of Argaman et al. (U.S. Patent Publication No. 2006/0052065; hereinafter “Argaman”).

Claim 7 is rejected under 35 U.S.C. § 103(a) as allegedly being unpatentable over Dahlman in view of Walton, and in further view of Isokangas et al. (U.S. Patent Publication No. 2004/0213297).

Claims 11, 12 and 13 are rejected under 35 U.S.C. § 103(a) as allegedly being unpatentable over Dahlman in view of Walton, and in further view of Mimura (U.S. Patent No. 6,021,123).

Applicants traverse the rejection for at least the following reasons.

Claim 1

Claim 1 recites, *inter alia*, “**assigning** a carrier frequency of a set of at least first and second carrier frequencies **to each one of the dedicated channels.**” The Examiner asserts that Dahlman discloses this element of claim 1 in paragraph [0008]. Applicants respectfully disagree with the Examiner for at least the following reasons.

Dahlman is directed to frequency reuse in a CDMA-based mobile communication system. In the background section, Dahlman discloses that CDMA-based systems are typically deployed with a one-to-one correspondence between uplink and downlink carrier frequency. Further, Dahlman discloses that more spectrum will be allocated for the downlink compared to that allocated to the uplink in the future. However, Dahlman does not disclose **assigning** a carrier frequency of a set of at least first and second carrier frequencies **to each one of the**

dedicated channels. That is, the portion of the reference cited by the Examiner discloses carrier frequencies $f_{DL,1}$ and $f_{DL,2}$. However, this does not disclose assigning a carrier frequency (i.e., $f_{DL,1}$ or $f_{DL,2}$ {alleged first and second carrier frequencies}) to **each one of the dedicated channels** that are provided for each one of the plurality of user equipments.

Further, claim 1 recites, *inter alia*, “sending one of the first signals to one of the plurality of user equipments on the dedicated channel of that user equipment on the assigned carrier frequency by applying a transmit diversity scheme.” The Examiner concedes that Dahlman does not disclose these elements of claim 1, but asserts that Walton allegedly discloses these features missing in Dahlman.

Walton is directed to a multiple-access multiple-input multiple-output (MIMO) communication system. Walton discloses a method for adaptively processing data prior to transmission in order to more closely match the data transmission to the capacity of the channel. With adaptive processing, the coding and modulation scheme used for the data transmission may be selected based on the characteristics of the communication channel (paragraph [0011]). However, Walton does not disclose sending one of the first signals to one of the plurality of user equipments on the dedicated channel of that user equipment **on the assigned carrier frequency** by applying a transmit diversity scheme.

In paragraph [0066], Walton merely discloses that “some forms of transmit diversity (i.e., MISO) may be employed for some transmission for single receive antenna terminals.” This, however, does not disclose **sending one of the first signals ... on the assigned carrier frequency.**

Furthermore, claim 1 recites, *inter alia*, sending one of the second signals to one of the plurality of user equipments on the code-multiplexed shared channel **on a carrier frequency assigned to that user equipment** by applying a multi-user diversity scheme.

In paragraph, [0323] and [0396]-[0400], Walton discloses scheduling and assigning terminals to the allocated channel. The scheduling can find combinations of “mutually compatible” terminals for simultaneous data transmission of the allocated channels by exploiting multi-user diversity. Further, Walton discloses that the scheduling of data transmission on the downlink for MIMO system comprises (1) selection of one or more sets of terminals for evaluation, and (2) assignment of the available transmit antennas to the selection terminals. However, this does not disclose, sending one of the second signals to one of the plurality of user equipments on the code-multiplexed shared channel **on a carrier frequency assigned to that user equipment** by applying a multi-user diversity scheme. That is, assignment of available antennas to selected terminals does not disclose sending a second signals **on a carrier frequency assigned to the user equipment.**

In view of the above, Applicants submit that claim 1 is allowable over the cited references.

Claim 5, 6 and 10

Applicants submit that claims 5, 6 and 10 recite subject matter analogous to claim 1, and therefore are allowable for at least the similar reasons claim 1 is allowable.

Claim 2

Applicants submit that since claim 2 depends from claim 1 and since Chang does not cure the deficiency noted above with regard to claim 1, claim 2 is allowable at least by virtue of its dependency.

Claims 3 and 8

Applicants submit that since claims 3 and 8 depend from either claim 1 or 6 and since Argaman does not cure the deficiency noted above with regard to claim 1, claims 3 and 8 are allowable at least by virtue of their dependency.

Claim 7

Applicants submit that since claim 7 depends from claim 6 and since Isokangas does not cure the deficiency noted above with regard to claim 1, claim 7 is allowable at least by virtue of its dependency.

Claims 11, 12 and 13

Applicants submit that since claims 11-13 depend from claim 1 and since Argaman does not cure the deficiency noted above with regard to claim 1, claims 11-13 are allowable at least by virtue of their dependency.

New claims

Applicants submit the claims 14-20 depend from claim 1, and therefore are allowable at least by virtue of their dependency and the additional limitations recited in the claims.

Conclusion

In view of the above, reconsideration and allowance of this application are now believed to be in order, and such actions are hereby solicited. If any points remain in issue which the Examiner feels may be best resolved through a personal or telephone interview, the Examiner is kindly requested to contact the undersigned at the telephone number listed below.

The USPTO is directed and authorized to charge all required fees, except for the Issue Fee and the Publication Fee, to Deposit Account No. 19-4880. Please also credit any overpayments to said Deposit Account.

Respectfully submitted,

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